

REMARKS

This Amendment is in response to the Office Action mailed on September 13, 2007. With this amendment, claims 11-17 are amended. Claims 1-10 are presented for reconsideration and allowance. Claims 18-20 have been allowed.

CLAIM REJECTIONS – 35 U.S.C. § 101

In the Office Action, claims 11-17 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. In particular, it was asserted that because the specification defined "computer-readable medium" to include a carrier wave, claims 11-17 were not limited to statutory subject matter.

With the present amendment, claim 11 has been amended to change "computer-readable medium" to "computer-readable storage medium." In the specification on page 5, lines 21-23, computer-readable media was said to comprise computer storage media and communication media. Computer storage media was further said to include RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical disk storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or other media which can be used to store the desired information and which can be accessed by computer 110. (See page 5, line 28 to page 6, line 6). Communication media, on the other hand, was said to include instructions and data structures in a modulated data signal such as a carrier wave or other transport mechanism. (See page 6, lines 6-10). Thus, in the specification, a distinction is made between computer-readable storage media and computer-readable communication media with computer-readable storage media being directed to tangible computer-readable media and communication media said to include carrier waves. Since a computer-readable storage medium is directed to a tangible computer-readable medium and not carrier waves, the amendments to claim 11 exclude communication media, such as carrier waves, and thus make claims 11-17 statutory.

CLAIMS 1-10

Claims 1-9 were rejected as being anticipated by Lau et al. (U.S. Patent No. 5,467,425), hereinafter referred to as ‘Lau’. Claim 10 was indicated as being allowable if rewritten in independent form.

Claim 1 provides a method of storing parameters of a deleted interpolation language model. The method includes obtaining a set of parameters for the deleted interpolation language model, wherein the parameters of the deleted interpolation language model allow an N-gram probability to be determined as a linear interpolation of a relative frequency estimate for the N-gram and a probability for a lower order n-gram. At least one parameter for the deleted interpolation language model is stored as a parameter for a backoff language model, wherein the backoff language model replaces an N-gram probability with a lower order n-gram for any N-gram that cannot be located in the backoff language model.

The amendments to claim 1 find support on page 10, lines 6-9 and page 16, lines 7-17.

Lau does not teach or suggest the method disclosed in claims 1. In particular, Lau does not store at least one parameter for a deleted interpolation language model as a parameter for a backoff language model.

At col. 2, lines 37-38 and lines 40-50, the lines cited by the examiner, Lau discusses a deleted interpolation trigram model. However, the cited sections do not show or suggest storing any of the parameters of the deleted interpolation trigram model as a parameter for a backoff language model. The innovation of the current invention exists in the storage of at least one parameter for the deleted interpolation language model as a parameter for a backoff language model. Under a backoff modeling technique, if an N-gram is not found in the training data, the probability for the N-gram is estimated using a probability for a sequence of n-1 words and a backoff weight. This is substantially different from a deleted interpolation language model, like the one shown in Lau, where the probability of an N-gram is calculated as a linear interpolation of lower order n-grams. Thus, under the invention of claim 1, the parameters for one type of

language model are being stored as parameters for a completely different type of language model.

Since Lau does not discuss a backoff language model, it cannot show or suggest storing a parameter of a deleted interpolation language model as a parameter of a backoff language model. As such, Lau does not show or suggest the method of claim 1 or claims 2-10, which depend therefrom.

CLAIMS 11-17

Claims 11-16 were rejected as being anticipated by Lau. Claim 17 was indicated as being allowable if rewritten in independent form.

Claim 11 provides a computer-readable storage medium having computer-executable instructions for performing steps comprising identifying a parameter for a deleted interpolation language model that forms probabilities through interpolations of values. The parameter is then placed in a data structure as a backoff parameter for a backoff language model that substitutes a weighed lower order n-gram probability for an N-gram probability when the N-gram cannot be located in the backoff language model.

Lau does not teach or suggest the computer-readable storage medium disclosed in claim 11. In particular, Lau does not show or suggest placing a parameter for a deleted interpolation language model in a data structure as a backoff parameter for a backoff language model. As noted above, a deleted interpolation language model is much different from a backoff language model. Since Lau does not discuss backoff language models, it does not show or suggest placing a parameter of a deleted interpolation language model in a data structure as a backoff parameter for a backoff language model. As such, claim 11 and claims 12-17 which depend therefrom, are patentable over Lau.

CONCLUSION

In light of the above remarks, claims 1-20 are in form for allowance. Reconsideration and allowance of the claims is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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